

2nd International Conference on Technology and Social Science ([ICTSS2018](#)) ,
Kiryu, Japan (18-20 April, 2018)

Invited Papers Session 03

[Organizer]

Prof. Haruo Kobayashi
Professor, Gunma University (Japan)

[Title] Analog/Power Supply Circuits and Their Related Technology

[Abstract]

This session is involved in analog/power supply circuits, which are key technologies for Internet-of-Things (IOT) and green environment. It covers wide range from fundamental theory to industry application, and also from basics to the state-of-the art.

April 18, 2018

Session 1: 13:00-14:55

13:00-13:30 (Keynote) **You Yin**, Ryoya Satoh and Keita Sawao
Properties of N-doped Sb₂Te₃ Film and Its Application to Artificial
Intelligence Synaptic Device

13:30-13:50 (Invited) **Jun-ichi Matsuda**, Jun-ya Kojima , Nobukazu Tsukiji,
Masataka Kamiyama, and Haruo Kobayashi
Low Switching Loss and Scalable 20-40 V LDMOS Transistors with Low
Specific On-Resistance

13:50-14:10 (Invited) **Yosuke IJIMA**, Keigo Taya and Yasushi
YUMINAKA
Optimization of waveform shaping for multi-valued signaling by using
variation evaluation of received signals

14:10-14:25 (Student) **Nene Kushita** , Jun-ya Kojima, Masahiro Murakami
and Haruo Kobayashi
Linearity Improvement Algorithms of Multi-bit $\Delta\Sigma$ DA Converter –
Combination of Unit Cell Re-ordering and DWA

14:25-14:40 (Student) **Yi Xiong**, Koyo Asaishi, Natsuko Miki, Yifei Sun, Nobukazu Tsukiji, Yasunori Kobori, Haruo Kobayashi
Multi-Phase Clock-less Switching Converter with EMI Noise Reduction

14:40-14:55 (Student) **Yifei Sun**, Yi Xiong, Yasunori Kobori and Haruo Kobayashi
Pulse Coding Controlled Switching Converter with Generating Automatic Frequency Tracking Notch Characteristics for Radio Receiver

Break

Session 2: 15:30-17:10

15:30-15:50 (Invited) **Yasunori Kobori**, Natsuko Miki, Yifei Sun, Nobukazu Tsukiji and Haruo Kobayashi
Output Voltage Ripple Correction with Spread Spectrum Using Frequency Modulation for Switching Converters

15:50-16:10 (Invited) **Anna Kuwana**, Tetuya Kawamura
Numerical Simulation and Its Possibility of Application to Green Environment

16:10-16:25 (Student) **Yukiko Shibasaki**, Koji Asami, Anna Kuwana, Yuanyang Du, Akemi Hatta, Kazuyoshi Kubo and Haruo Kobayashi
Study on Multi-Tone Signals for Design and Testing of Linear Circuits and Systems

16:25-16:40 (Student) **Noriyuki Oiwa**, Shotaro Sakurai, Nobukazu Tsukiji, Yasunori Kobori, Haruo Kobayashi
A Study on EMI Noise Reduction in Boost-Type PFC Circuit

16:40-17:10 (Keynote) **Haruo Kobayashi**,
Analog / Mixed-Signal IC Design and Testing Based on Mathematics